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Date:

September 18, 2007

Number of pages (including cover):

To:

Examiner E.P. LeRoux, U.S. Patent and Trademark Office

Fax No.:

(571) 273-8300

Serial No.: 10/762,036

Title:

METHODS AND APPARATUS FOR INDIRECTLY IDENTIFYING A

RETENTION PERIOD FOR DATA IN A STORAGE SYSTEM

From:

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Direct dial: 617.646.8243

Our File #: E0295.70201US00

CERTIFICATE OF FACSIMILE TRANSMISSION 37 C.F.R. §1.8(a)

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Jeanne W. Chub

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MESSAGE:

Transmitted herewith is a Proposed Agenda for Telephone Interview.

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PAGE 1/4* RCVD AT 9/18/2007 1:54:00 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:2738300 * CSID: * DURATION (mm-ss):01-40

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SEP 1 8 2007

Docket No.: E0295.70201US00

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Stephen J. Todd et al.

Serial No.:

10/762,036

Confirmation No.:

3938

Filed:

January 21, 2004

For:

METHODS AND APPARATUS FOR INDIRECTLY IDENTIFYING

A RETENTION PERIOD FOR DATA IN A STORAGE SYSTEM

Examiner:

E.P. LeRoux

Art Unit:

2161

CERTIFICATE OF FACSIMILE TRANSMISSION 37 C.F.R. \$1.8(a)

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PROPOSED AGENDA FOR TELEPHONE INTERVIEW

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Applicants thank Examiner LeRoux for agreeing to hold an examiner interview on September 19, 2007, at 1 pm. Applicants propose the following agenda.

A. Claim 29

Applicants would like clarification on how the Examiner understands Ghose to disclose the limitations of claim 29 that recite that "the first information is information identifying a retention class to which the unit of data belongs," "the second information is a retention period associated with the retention class," and "the method further comprises an act of maintaining, on the at least one storage system, a record associating the retention period with the retention class."

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Application No.: 10/762,036

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1. Overview of Embodiments of the Invention

Embodiments of Applicants' invention are directed to retention periods for units of data stored on a storage system. In a system that implements a retention period for a unit of data, the system may associate a retention period with the unit of data (Specification, page 9, lines 6-9). The retention period may define a period of time during which the unit of data cannot be deleted or modified (Specification, page 9, lines 9-10). In some embodiments, retention classes may be used to define retention periods for one or more units of data stored on a storage system. For example, a unit of data may identify a retention class to which it belongs (Specification, page 31, lines 16-19). The retention class may have a value associated with it that defines the retention period for all units of data the belong to the retention class (Specification, page 31, lines 16-19). For example, as shown in Figure 8, units of data belonging to the "E-mail" retention class have a retention period of seven years from the date they were initially stored on the storage system, while units of data belonging to the "Financial Records" retention class have a retention period of five years from the date of their initial storage (Specification, page 31, lines 24-28; Figure 8).

2. Applicants' Understanding of Ghose

Ghose teaches methods for "managing the occurrence of errors generated in a storage area network" including "object-oriented classes and methods used to implement the error analysis and management" (Ghose, Abstract; ¶0051). In Applicants' understanding, Ghose discloses a Threshold class that identifies errors that must occur multiple times before the system acts upon the errors (¶0053). The timeWindow attribute of this Threshold class "provides a time period from beginning to end to measure threshold amounts" (¶0053). In other words, the timeWindow attribute provides the setting for when Ghose's system should be monitoring for errors specified in the eventCode attribute of the Threshold class.

For example, a storage system in a storage area network may recognize that changes in network conditions (e.g., congestion) may lead to some storage servers being detected as unreachable in a first connection attempt while a connection may be established in a second connection attempt. The storage system may therefore specify that an error which is thrown when a destination storage server is unreachable must occur at least three times within 10 seconds (i.e., a

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threshold number of times in a specified time period). If the "unreachable destination" error is only thrown once or twice in a 10-second period, then the errors are not handled in any way and the counter is reset. However, if the error occurs more three or more times in a 10-second period, then the error may be handled, such as by notifying an error of a problem in the network. Thus, the timeWindow attribute in the example would be ten seconds.

3. Points for Discussion

It is Applicants' understanding that the timeWindow attribute in Ghose indicates a window during which a counter that counts the number of times an error has occurred is kept (i.e., at the end of the window the counter is reset). This attribute does not appear to identify a retention class to which a unit of data belongs or a retention period associated with the retention class. Indeed, the disclosure of Ghose appears unrelated to ensuring that the content is retained on a storage system. Applicants would like to discuss how the Examiner is interpreting Ghose and, in particular the timeWindow attribute, to be related to retention periods and retention classes.

B. The combination of Hochberg and Ghose

The Office Action states that one of skill in the art would have modified Hochberg based on the teachings of Ghose to provide a time period from beginning to end to measure threshold amounts. It is unclear to Applicants what modifications the Examiner believes one of skill in the art would have made to the system of Hochberg based on the teachings of Ghose. Applicants would like to discuss what changes the Examiner believes one of skill in the art would have made to the system of Hochberg based on Ghose.

Respectfully submitted.

y: ___

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Date: September 15, 2007

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